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CH2M HILL

155 Grand Avenue, Suite 800
Oakland, CA 94612
P.O. Box 12681
Oakland, CA 94604-2681
Tel 510.251.2426
Fax 510.622.9000

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Ms. Carolyn d'Almeida United States Environmental Protection Agency 75 Hawthorne Street, CMD-4-2 San Francisco, CA 94105

Subject: Revised Polychlorinated Biphenyl Site Building 688 UL#02 in Investigation Area C2,

Where No Further Action Is Required under the United States Environmental

Protection Agency Consent Agreement and Final Order

Dear Ms. d'Almeida:

CH2M HILL prepared this letter to comply with the Consent Agreement and Final Order (CA/FO) between United States Environmental Protection Agency (USEPA) and the United States Department of the Navy (Navy), with the City of Vallejo and Lennar Mare Island, LLC (LMI), as intervenors (USEPA et al. 2001). The CA/FO sets forth the polychlorinated biphenyl (PCB)-related requirements that must be met to satisfy the Toxic Substances Control Act (TSCA) for LMI's Eastern Early Transfer Parcel, Vallejo, California.

CH2M HILL submitted a request for no further action (NFA) at PCB Site Building 688 UL#02 to USEPA on October 7, 2009 (CH2M HILL 2009). USEPA did not concur with the request for NFA and requested further characterization of the floor at PCB Site Building 688 UL#02 in a letter dated February 4, 2010 (USEPA 2010). In the letter, USEPA also requested further characterization of the subsurface pits, which are being addressed separately as part of the Building 688 Pits site. Additional investigation activities were performed at PCB Site Building 688 UL #02 in August 2010 in response to USEPA's request. Pursuant to Paragraph 6(a) of the CA/FO, this letter demonstrates that an NFA determination under TSCA is appropriate, with respect to PCB contamination, as part of the overall regulatory closure process for PCB Site Building 688 UL#02 on LMI's Eastern Early Transfer Parcel.

Additional concrete sampling was conducted at stain-specific locations between the previous sample locations, to provide additional data to support the request for NFA at the site. An NFA determination is appropriate because (1) the Navy performed cleanup actions prior to August 28, 1998, and (2) the August 2010 sampling results confirmed that the PCB concentrations in the samples from the remaining concrete are less than the alternative substantive cleanup requirements (SCRs). The alternative SCRs are a maximum total PCB concentration less than 10 milligrams per kilogram (mg/kg) and an average PCB concentration less than 5 mg/kg. In accordance with Paragraphs 7 and 8 of the CA/FO, NFA is

appropriate for PCB Site Building 688 UL#02, with a deed restriction limiting the property to industrial use.

Site Identification

Using visual site surveys, reviews of historical records, building closure reports, and databases of electrical equipment, the Navy identified sites where PCB-containing equipment was located, PCB spills were documented, or contamination was suspected because of building history or visible stains (Tetra Tech Environmental Management, Inc. 1999). Navy personnel from Supervisor of Shipbuilding, Conversion and Repair, Portsmouth, Virginia, Environmental Detachment (SSPORTS) conducted interim PCB assessments and performed cleanup actions (e.g., washing, scabbling) in accordance with technical work documents (TWDs), where necessary.

Building 688, a pump test shop built in 1941, is located east of Railroad Avenue and south of Oklahoma Street (formerly 13th Street) in Investigation Area C2. Building 688 is currently occupied and used for material storage. According to the *Preliminary Land Use Plan* (SWA Group 2000), Building 688 is in an area designated for future industrial use. Figure 1 shows the location of PCB Site Building 688 UL#02.

Three previously unidentified PCB sites are associated with Building 688 that were not listed in the Consent Agreement signed April 16, 2001, by LMI, the City of Vallejo, and the State of California Environmental Protection Agency, Department of Toxic Substances Control (LMI et al. 2001): UL#01, UL#02, and Building 688 Pits. PCB Site Building 688 UL#01 consists of concrete, manholes, soil, and asphalt associated with a transformer pad adjacent to the western exterior wall of Building 688 and is being addressed in a separate submittal. PCB Site Building 688 UL#02 consists of the building floor stains in the northern, southeastern, and central interior of Building 688. Building 688 Pits consists of loose sediment and debris inside covered pits beneath the floor of Building 688 and is being addressed in a separate submittal (Figure 1).

Site Investigations and Cleanup Actions

The following site investigation summary is based on CH2M HILL's review and interpretation of historical information contained in TWDs 95-0340 and 95-0328 (SSPORTS 1995a and 1995b, respectively), which were found during the transition of Navy documents to LMI before work began under the Consent Agreement (LMI et al. 2001). From this historical documentation, it appears that in April 1995, SSPORTS performed PCB sampling activities inside Building 688. A hand-annotated figure attached to one of the TWDs shows what appear to be approximately 40 proposed sample locations on the first floor of Building 688. However, there is only documented evidence that four samples were collected, from the laboratory data sheets, and that actions were proposed at two of the locations. The PCB concentrations detected in and associated data the four samples collected by SSPORTS (5103-0644, 5103-0645, 5103-0667, and 5103-0668) are summarized in Table 1. The approximate collection locations of samples 5103-0667 and 5103-0645, in which the PCB

concentrations were 4.09 and 2.45 micrograms per sample area ($\mu g/sample$), respectively, are shown on Figure 2. The locations shown on Figure 2 were based on the locations shown on the hand-annotated figure in TWD 95-0328 (SSPORTS 1995b). Wipe sample 5103-0668 (15.1 $\mu g/sample$) was collected from a stained area of the floor in the southeastern part of Building 688, and wipe sample 5103-0644 (11.2 $\mu g/sample$) was collected from a stain on the floor in the northern part of Building 688 (SSPORTS 1995a and 1995b) (Figure 2).

As part of work performed in accordance with TWD 95-0328, SSPORTS decontaminated the stained area in the northern part of Building 688, where previous wipe sample 5103-0644 (11.2 μ g/sample) was collected (SSPORTS 1995b) (Figure 2). The floor stain was double-washed with industrial-strength detergent or non-ionic surfactant solution and rinsed. Additionally, in accordance with TWD 95-0340 (SSPORTS 1995a), SSPORTS decontaminated a stain in the southeast end of Building 688, where previous wipe sample location 5103-0668 (15.1 μ g/sample) was collected (Figure 2). The floor stain was double-washed with industrial-strength detergent or non-ionic surfactant solution and rinsed.

According to historical laboratory data sheets provided as part of the TWDs, in 1996, SSPORTS collected one concrete chip sample (6120-0018) from a floor stain in the northern part of the building (1.6 mg/kg), one oil sample (6120-0019) from a starting compensator (3.9 parts per million [ppm]) that was located in the southern portion of the building at that time, and one additional concrete sample (6120-0017) from an unknown location (1.5 mg/kg). On the basis of visual observations inside the building, it is believed that the starting compensator from Building 688 was removed prior to CH2M HILL's involvement at the site.

On June 28, 2002, CH2M HILL collected one wipe verification sample (B688UL2WP0273) from the northern stain (near sample location 5103-0644) and one concrete chip verification sample (B688UL2CH0274) from the southeastern stain (near sample location 5103-0668) (Figure 2). PCBs were detected in wipe sample B688UL2WP0273 at a total concentration of 1.32 micrograms per 100 square centimeters and in concrete chip sample B688UL2CH0274 at a total concentration of 0.42 mg/kg (Figure 2).

CH2M HILL personnel performed a site visit on June 11, 2010, to select locations for collecting concrete floor samples. On August 19, 2010, CH2M HILL collected one concrete chip sample from each of 13 stain-specific locations between the previously collected samples (Figure 2). The concrete chip samples were analyzed for PCBs using USEPA Method SW8082. PCBs were detected at total concentrations above laboratory detection levels in each of the 13 samples; concentrations ranged from 0.041 to 1.7 mg/kg.

Table 1 lists remaining concentrations of total PCBs at PCB Site Building 688 UL#02. This table includes the sample numbers, matrices, dates, and total PCB concentrations (or laboratory detection levels if PCBs were not detected). Sample locations and remaining concentrations are shown on Figure 2.

Polychlorinated Biphenyl Site Closure Process

PCB Site Building 688 UL#02 meets the site closure criteria under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and TSCA. Under CERCLA, NFA is appropriate at a PCB site if no potential source and no PCB contamination are present (CH2M HILL 2003). Even if a potential source or PCB contamination is present in machinery or building materials, NFA is appropriate under CERCLA if there has been no release of PCBs to soil or groundwater and no visible pathway exists for migration of PCBs to soil or groundwater (CH2M HILL 2003); such sites will be evaluated under TSCA for site closure in accordance with the CA/FO (USEPA et al. 2001). If there has been a known release to soil or groundwater, NFA is also appropriate if the detected PCB concentrations in soil and groundwater do not exceed the applicable screening level, or if results of a site-specific risk evaluation demonstrate that potential risks associated with exposure to residual PCBs are within the risk-management range generally used to determine whether cleanup is necessary.

According to the *Final Polychlorinated Biphenyl Work Plan* (CH2M HILL 2003), and under TSCA, NFA is appropriate at PCB sites where the maximum remaining total PCB concentrations comply with the alternative SCRs provided in Paragraph 8 of the CA/FO. The total PCB concentrations in solid samples from locations not removed from PCB Site Building 688 UL#02 meet the alternative SCRs as outlined in CA/FO Paragraph 8(b)(2), which states the following: "For concrete and wood floors with an average PCB concentration, based on chip samples taken from the surface of dry concrete or wood which was contaminated or presumed contaminated by PCBs, of 5 ppm or less, with a maximum concentration of 10 ppm in any sample, the PCBs in the concrete are disposed of and require no further remediation provided that there shall be a deed restriction limiting the property to industrial use only" (USEPA et al. 2001).

Conclusions

The average (defined as the 95 percent upper confidence limit of the mean) remaining PCB concentration in concrete at PCB Site Building 688 UL#02 is 1.1 mg/kg. The maximum PCB concentration in concrete chip samples from concrete remaining at PCB Site Building 688 UL#02 is 1.7 mg/kg (B688UL02CH0281 and B688UL02CH0286). Therefore, PCB Site Building 688 UL#02 meets the alternative SCRs presented in Paragraph 8(b)(2) of the CA/FO for porous surfaces, with an average remaining PCB concentration less than 5 mg/kg and maximum remaining PCB concentration less than 10 mg/kg. NFA with the implementation of an industrial deed restriction is appropriate for PCB Site Building 688 UL#02.

Consequently, CH2M HILL requests that USEPA issue an NFA determination for PCB Site Building 688 UL#02, with implementation of a PCB-specific deed restriction limiting the concrete floor of Building 688 to industrial uses, in accordance with the alternative SCRs in

Paragraph 8(b)(2) of the CA/FO and Title 40 of the Code of Federal Regulations, Part 761.61(c).

Please respond to this letter with confirmation that, in accordance with the approved *Final Polychlorinated Biphenyl Work Plan* (CH2M HILL 2003) and the CA/FO (USEPA et al. 2001), NFA is appropriate under TSCA for PCB Site Building 688 UL#02. Please submit your approval to Stephen Farley at the above address or via email at <u>Stephen.Farley@ch2m.com</u>. If you have questions regarding the PCB site addressed in this letter, please contact Jennifer Lindquist at 530/229-3224 or Stephen Farley at 707/647-1851.

Sincerely, CH2M HILL

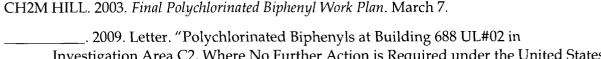
Jennifer Lindquist Project Manager

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Enclosures: Table 1, Figures 1 and 2

Stephen M. Farley, P.G. Senior Technical Consultant

References



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Copy to (with enclosures):

Ms. Janet Naito
California Environmental Protection Agency
Dept. of Toxic Substances Control
700 Heinz Avenue, Suite 200
Berkeley, CA 94710-2721
(Electronic copy only)

Mr. Gil Hollingsworth 555 Santa Clara Street Vallejo, CA 94590-5934 (Electronic copy only)

Mr. Michael F. McGowan, Ph.D. Arc Ecology 4634 – 3rd Street San Francisco, CA 94124 (Electronic copy only) Mr. Gordon Hart Paul, Hastings, Janofsky, Walker, LLP 55 Second Street, 24th Floor San Francisco, CA 94105-3411

Mr. Neal Siler Lennar Mare Island, LLC 690 Walnut Avenue, Suite 100 Vallejo, CA 94592 (Electronic copy also) Ms. Myrna Hayes 816 Branciforte Street Vallejo, CA 94590

Ms. Sheila Roebuck Lennar Mare Island, LLC 690 Walnut Avenue, Suite 100 Vallejo, CA 94592 (Electronic copy of IA B.1, IA H2, and IA D1.3 only) Mr. Mike Mentink United States Navy Caretaker Site Office 410 Palm Avenue, Building 1, Suite 161 San Francisco, CA 94130 (2 copies)

Ms. Karen Lubovinsky 449 Union School Rd, Ste 101 Oxford, PA 19363 (Electronic copy only) Mr. John Catts 130 Camino Margarita Nicasio, CA 94946 (Electronic copy only)

Ms. Kanan Sheth Zurich North America Specialties P.O. Box 307010 Jamaica, NY 11430-7010 (Electronic copy only)

CH2M HILL copies: Paula Bolio

Clemena Balbuena
Tim Graves (Electronic copy only)

Ed Aromi (Electronic copy only)

Copy to (without enclosures):

Ms. Janet Whitlock U.S. Fish and Wildlife Service 2800 Cottage Way, Room W-2605

Sacramento, CA 95825

Mr. Justice Budu 107 Fieldstone Way Vallejo, CA 94589

Ms. Laurie Sullivan

National Oceanic and Atmospheric

Administration

75 Hawthorne Street, 9th Floor

San Francisco, CA 94105

(Electronic copy only via email)

Mr. Mike Coffey 6 Oriole Court

American Canyon, CA 94503

Mr. Ron Pilkington

Bay Area Air Quality Management District

939 Ellis Street

San Francisco, CA 94109

Mr. James O'Loughlin 1449 Sheridan Drive Napa, CA 94558

Mr. Kenneth Browne 109 El Camino Real

Vallejo, CA 94590

Mr. Adam A. Chavez 1031 Florida Street Vallejo, CA 94590-5513

Mr. Gerald Karr 149 Garden Court Vallejo, CA 94591

Ms. Paula Tygielski 456 East L Street Benicia, CA 94510 Mr. Max Delaney

San Francisco Bay Conservation and

Development Commission 50 California Street, Suite 2600 San Francisco, CA 94111

Mr. Terry Schmidtbauer

Dept. of Resource Management

County of Solano

675 Texas Street, Suite 5500

Fairfield, CA 94533

Fire Chief Douglas Robertson Vallejo Fire Department 703 Curtola Parkway Vallejo, CA 94590

TABLE 1
Sample Results for PCB Site Building 688 UL#02
PCB Sites, Lennar Mare Island, Vallejo, California

Sample Location	Sample Matrix	Sample Date	Total PCB Concentration ^a	Comments
5103-0644	Concrete	04/14/1995	11.2 μg/sample	Stain in northern portion of building; Aroclor-1254; removed under TWD 95-0328
5103-0645	Concrete	04/14/1995	2.45 μg/sample	Collected from southern portion of building; Aroclor-1254
5103-0667	Concrete	04/17/1995	4.09 μg/sample	Collected from southern northern portion of building; Aroclor-1254
5103-0668	Concrete	04/17/1995	15.1 μg/sample	Stain in southeastern portion of building; removed under TWD 95-0340; Aroclor-1254
6120-0017	Concrete	04/1996	1.5 mg/kg	Unknown location inside Building 688; Aroclor-1260
6120-0018	Concrete	04/30/1996	1.6 mg/kg	Stain in northern portion of building; Aroclor-1260
6120-0019	Oil	04/1996	3.9 ppm	Oil sample from starting compensator; Aroclor-1260; removed
B688UL2WP0273	Concrete	06/28/2002	1.3 μg/100 cm ²	Proxy value for Aroclor-1254 is 0.17 μ g/100 cm ² ; Aroclor-1260 = 1.3 μ g/100 cm ²
B688UL2CH0274	Concrete	06/28/2002	0.42 mg/kg	Proxy value for Aroclor-1254 is 0.017 mg/kg; Aroclor-1260 = 0.42 mg/kg
B688UL02CH0275	Concrete	08/19/2010	0.16J mg/kg	Aroclor-1254 0.13J mg/kg; Aroclor-1260 = 0.03 mg/kg
B688UL02CH0276	Concrete	08/19/2010	0.096J mg/kg	Aroclor-1254 = 0.067 mg/kg; Aroclor-1260 = 0.023J mg/kg;
B688UL02CH0277	Concrete	08/19/2010	0.041 mg/kg	Aroclor-1254 = 0.022 mg/kg; Aroclor-1260 = 0.013 mg/kg
B688UL02CH0278	Concrete	08/19/2010	0.73 mg/kg	Aroclor-1254 = 0.4 mg/kg; Aroclor-1260 = 0.32 mg/kg
B688UL02CH0279	Concrete	08/19/2010	0.46 mg/kg	Aroclor-1254 = 0.31 mg/kg; Aroclor-1260 = 0.14 mg/kg
B688UL02CH0280	Concrete	08/19/2010	1.4 mg/kg	Aroclor-1254 = 0.93 mg/kg; Aroclor-1260 = 0.48 mg/kg
B688UL02CH0281	Concrete	08/19/2010	1.7 mg/kg	Aroclor-1254 = 1.2 mg/kg; Aroclor-1260 = 0.48 mg/kg
B688UL02CH0282	Concrete	08/19/2010	0.069 mg/kg	Aroclor-1254 = 0.036 mg/kg; Aroclor-1260 = 0.027 mg/kg
B688UL02CH0283	Concrete	08/19/2010	0.074 mg/kg	Aroclor-1254 = 0.051 mg/kg; Aroclor-1260 = 0.017 mg/kg
B688UL02CH0284	Concrete	08/19/2010	0.72 mg/kg	Aroclor-1254 = 0.48 mg/kg; Aroclor-1260 = 0.23 mg/kg
B688UL02CH0285	Concrete	08/19/2010	0.98 mg/kg	Aroclor-1254 = 0.73 mg/kg; Aroclor-1260 = 0.24 mg/kg
B688UL02CH0286	Concrete	08/19/2010	1.7 mg/kg	Aroclor-1254 = 0.9 mg/kg; Aroclor-1260 = 0.77 mg/kg

TABLE 1 Sample Results for PCB Site Building 688 UL#02 PCB Sites, Lennar Mare Island, Vallejo, California

Sample Location	Sample Matrix	Sample Date	Total PCB Concentration ^a	Comments	
B688UL02CH0287	Concrete	08/19/2010	0.91 mg/kg	Aroclor-1254 = 0.63 mg/kg; Aroclor-1260 = 0.27 mg/kg	

^aFor samples collected by CH2M HILL, total PCBs are calculated by summing the detected Aroclors and, for nondetects, by using a proxy value of one-half the laboratory detection level for historically detected Aroclors and adding this to detected Aroclors.

Notes:

 $\mu g/100 \text{ cm}^2$ micrograms per 100 square centimeters. $\mu g/\text{sample}$ micrograms per sample area.

µg/sample

estimated detected result.

mg/kg

milligrams per kilogram.

ppm

parts per million.

PCB

polychlorinated biphenyl.
Technical Work Document.

TWD



